



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,200	03/11/2004	Naohiro Hirose	KOY-23	6190
20311 7590 03/23/2007 LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016			EXAMINER DOTE, JANIS L	
			ART UNIT 1756	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/23/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/798,200

Applicant(s)

HIROSE ET AL.

Examiner

Janis L. Dote

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-22 is/are pending in the application.
- 4a) Of the above claim(s) 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-11 is/are rejected.
- 7) ☒ Claim(s) 21 and 22 is/are objected to.
- 8) ☒ Claim(s) 1-5 and 7-22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 1756

1. The examiner acknowledges the cancellation of claim 6, the amendments to claims 1, 3, 5, and 9-11, and the addition of claims 21 and 22 filed on Jan. 11, 2007. Claims 1-5 and 7-22 are pending.

2. Applicants' election of the invention in Group I, which now includes claims 1-5, 7-11, 21, and 22, in the reply filed on Jan. 11, 2007, is acknowledged. Because applicants did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Accordingly, claims 12-20 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. The election in the reply filed on Jan. 11, 2007, has been treated as an election **without** traverse.

3. The objection to the specification set forth in the office action mailed on Oct. 13, 2006, paragraph 5, has been withdrawn in response to the amendments to the specification filed on Jan. 11, 2007.

Art Unit: 1756

The rejections of claim 11 under 35 U.S.C. 102(b) over US 2002/0058193 A1 (Tosaka), of claims 1-6 and 9 under 35 U.S.C. 102(b)/103(a) over Tosaka, and of claim 10 under 35 U.S.C. 103(a) over Tosaka, set forth in the office action mailed on Oct. 13, 2006, paragraphs 9-11, respectively, have been withdrawn in response to the amendments to claims 1 and 11 filed on Jan. 11, 2007. Those amendments added the limitations that the toner is a "yellow toner" and that the yellow toner includes "o-anisidine in an amount of 50 ppm or less." For all of applicants' reasons set forth in the response filed on Jan. 11, 2007, pages 12-13, Tosaka does not teach or suggest such a yellow toner.

The rejection of claims 1-11 under 35 U.S.C. 103(a) over US 2002/019582 A1 (Yamazaki) combined with Tosaka, set forth in the office action mailed on Oct. 13, 2006, paragraph 12, has been withdrawn in response to the amendments to claims 1 and 11 described supra. For all of applicants' reasons set forth in the response filed on Jan. 11, 2007, page 13, the prior art does not teach or suggest a yellow toner as recited in the instant claims.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 1756

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 10-288863 (JP'863) combined with US 5,518,848 (Ito). See the Japanese Patent Office (JPO) machine-assisted translation of JP'863 for cites.

JP'863 discloses a yellow toner comprising the diazo pigment, C.I. Pigment Yellow 17, as the yellow colorant and a polyester binder resin. The toner comprises 1 ppm of the aromatic amine o-anisidine. The toner has a volume-average particle size of 8.5 μm . Translation, synthesis example 4 in paragraph 0043; example 4 in paragraphs 0049 to 0051; paragraph 0053, line 5; and Table 1, first and second entries of example 4. (The translation in paragraph 0053, line 5, recites the aromatic amine "o-anisidine." In JP'863, paragraph 0053, line 7, o-anisidine is written in the Japanese language as o-アニシジン, which is repeated in the third column in Table 1, reporting the amount of 1 ppm of o-anisidine present in the toners.) The o-anisidine amount 1 ppm meets the amount range of "50 ppm or less in the toner" recited in instant claim 11.

JP'863 does not exemplify a toner comprising a binder resin obtained by polymerizing a radical-polymerizable monomer as recited in the instant claim. However, JP'863 teaches that the binder resin can equally be a styrene-acrylic resin.

Translation, paragraph 0034, line 4.

Art Unit: 1756

Ito teaches a toner binder styrene copolymer resin obtained by polymerizing styrene and the acrylic monomer n-butylacrylate. The toner binder resin has a softening point of 134°C and a glass transition temperature (Tg) of 60°C. The binder resin comprises a high molecular weight component having a peak at a molecular weight of 545,000, a low molecular weight component having a peak at a molecular weight of 6,500, and a shoulder at a molecular weight of 1,200. Example 18 at col. 27. According to Ito, when its styrene copolymer is used as the binder resin in a toner, the toner is excellent in fixing property, anti-offset property, image characteristics, and blocking resistance. Col. 2, lines 34-43, and col. 27, lines 51-55.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings in Ito, to use the styrene copolymer in example 18 of Ito as the binder resin in the yellow toner disclosed by JP'863. That person would have had a reasonable expectation of successfully obtaining a yellow toner having the benefits taught by Ito.

Instant claim 11 is written in product-by-process format. JP'863 does not disclose that its toner is obtained "by polymerization of a radical-polymerizable monomer in aqueous vehicle" as recited in instant claim 11. The yellow toner in JP'863 is obtained by a melt-kneading-pulverization-classification method. See translation,

Art Unit: 1756

example 4. However, as discussed supra, the combined teachings of JP'863 and Ito render obvious a yellow toner that meets the compositional limitations recited in instant claim 11. Thus, it appears that the yellow toner rendered obvious over the combined teachings of the prior art is the same or substantially the same as the yellow toner made by the process limitation recited in instant claim 11. The burden is on applicants to prove otherwise. In re Marosi, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985). MPEP 2113.

6. Claims 1-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'863 combined with Ito, further combined with US 6,335,135 B1 (Arai). See the JPO translation of JP'863 for cites.

JP'863 combined with the teachings in Ito renders obvious a yellow toner as described in paragraph 5 above, which is incorporated herein by reference.

As discussed in paragraph 5, above, the JP'863 yellow toner comprises 1 ppm of o-anisidine. The amount of 1 ppm of o-anisidine meets the amounts of 50 ppm or less, 30 ppm or less, and 10 ppm or less recited in instant claim 1, instant claims 3, 5, and 9, and instant claim 10, respectively. In addition, the softening point and the Tg of the Ito styrene copolymer toner

Art Unit: 1756

binder resin in example 18 are both within the temperature ranges recited in instant claim 8. The Ito binder resin also meets the molecular weight component limitations recited in instant claim 7. Thus, the combined teachings of JP'863 and Ito render obvious a yellow toner that meets the toner compositional limitations recited in instant claims 1-5 and 7-10.

However, JP'863 does not exemplify a yellow toner having a volume average particle size of 3 to 8 μm as recited in instant claim 1. As discussed in paragraph 5 above, the JP'863 yellow toner in example 4 has a volume average particle size of 8.5 μm , which is outside the volume average particle size range recited in instant claim 1.

Arai teaches that when toner particles are obtained by a melt-kneading-pulverization-classification method, it is desired that the toner particles have a volume average particle size of the toner of 4 to 12 μm , preferably 4 to 9 μm . Col. 5, line 60, to col. 6, line 1. The JP'683 volume average particle size of 8.5 μm is within both Arai ranges. As discussed in paragraph 5 above, the JP'683 yellow toner is also obtained by a melt-kneading-pulverization-classification method. According to Arai, when the volume average particle size is smaller than this range, "fluidity is reduced and fogging may readily occur." When the particle size is larger than this range, "resolution is

Art Unit: 1756

reduced and high quality images cannot be obtained." Col. 6, lines 1-4. The ranges of 4 to 12 μm and of 4 to 9 μm overlap the range of 3 to 8 μm recited in instant claim 1. Thus, the toner art recognizes the volume average particle size as a result-effective variable in a size range that has substantial overlap, especially the preferred range, with the range recited in claim 1. The variation of a result-effective variable is presumably within the skill of the person having ordinary skill in the art.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Arai, to adjust, through routine experimentation, the particle size of the yellow toner particles rendered obvious over the combined teachings of JP'863 and Ito, such that the resultant toner has a volume average particle size that is within the scope of instant claim 1. That person would have had a reasonable expectation of successfully obtaining a yellow toner that provides images with improved resolution with reduced fogging.

Instant claims 1, 2, and 4 and claims dependent thereon are written in product-by-process format. JP'863 does not disclose that its toner is obtained "by a polymerization method" as recited in instant claim 1, or "by polymerization of radical-polymerizable monomer in aqueous vehicle" as recited instant claim 2, or "by fusing

Art Unit: 1756

resin particles formed from radical-polymerizable monomer and particles of a coloring material in an aqueous vehicle" as recited in instant claim 4. As discussed in paragraph 5, the yellow toner in JP'863 is obtained by a melt-kneading-pulverization-classification method. See translation, example 4. However, as discussed supra, the combined teachings of JP'863, Ito, and Arai render obvious a yellow toner that meets the compositional limitations and particle size limitations recited in the instant claims. Thus, it appears that the yellow toner rendered obvious over the combined teachings of the prior art is the same or substantially the same as the yellow toner made by the process limitation recited in the instant claims. The burden is on applicants to prove otherwise. Marosi, supra; Thorpe, supra; and MPEP 2113.

7. Claims 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Instant claims 21 and 22 require that the coloring agent be C.I. Pigment Yellow 74. According to the American Chemical Society (ACS) File registry No. 6358-31-2, C.I. Pigment Yellow 74 is a monoazo pigment. See the chemical structure disclosed with the registry number. As discussed in paragraph 5 above, JP'863 teaches a yellow toner comprising the diazo

Art Unit: 1756

pigment, C.I. Pigment Yellow 17. JP'863 does not teach or suggest a yellow toner comprising a monoazo yellow pigment, let alone C.I. Pigment Yellow 74.

8. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to

Art Unit: 1756

Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLD

Mar. 21, 2007

Janis L. Dote
JANIS L. DOTE
PRIMARY EXAMINER
GROUP 1500
1700